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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/688,618	10/17/2003	Masanori Shinozaki	12844.0048US01	2442
23552	7590	05/12/2005	EXAMINER	
MERCHANT & GOULD PC P.O. BOX 2903 MINNEAPOLIS, MN 55402-0903			PENG, KUO LIANG	
			ART UNIT	PAPER NUMBER
			1712	

DATE MAILED: 05/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/688,618	Applicant(s) SHINOZAKI, MASANORI	
	Examiner Kuo-Liang Peng	Art Unit 1712	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 3/18/05 RCE.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 5-7 is/are rejected.
- 7) ☒ Claim(s) 4 and 8 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>3/18/05</u> . | 6) <input type="checkbox"/> Other: _____ |

Handwritten marks: "K5" and a signature.

DETAILED ACTION

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after allowance or after an Office action under *Ex Parte Quayle*, 25 USPQ 74, 453 O.G. 213 (Comm'r Pat. 1935). Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, prosecution in this application has been reopened pursuant to 37 CFR 1.114. Applicant's submission filed on March 18, 2005 has been entered.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by JP757 (JP 11-207757).

JP757 discloses a solid lubricant comprising a suspension having a RBC suspended in a liquid resin such as epoxy resin, etc. ([0006]-[0013]) Note that the

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suspension is capable of forming a dry film by coating and drying thereof. The English translation of the instant reference has been requested by Examiner. It will be available to Applicants later upon request.

4. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by JP389 (JP 03-060389).

JP389 discloses a solid lubricant comprising a suspension having a rice bran suspended in a liquid thermosetting resin. (Claim 1) the rice bran is defatted and carbonized into RBC. (Claim 3 and Figures) Note that the suspension is capable of forming a dry film by coating and drying thereof. The English translation of the instant reference has been requested by Examiner. It will be available to Applicants later upon request.

5. Claims 1-3 and 5-7 are rejected under 35 U.S.C. 102(b) as being anticipated by Shinozaki (JP 2002-030222).

Shinozaki discloses a sliding member having a sliding surface covered with a solid lubricant comprising a suspension having a RBC suspended in a liquid thermosetting resin such as polyacetal, etc. ([0016]-[0019]) The amount of RBC can be 22 to 50 wt% as described in [0021]-[0022] and [0024]. The mean particle

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diameter of RBC can be 2 to 5 microns as described in [0025]. The English translation of the instant reference has been requested by Examiner. It will be available to Applicants later upon request.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 2-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP757.

JP757 discloses a solid lubricant, supra, which is incorporated herein by reference. JP757 is silent on the amount of the RBC used and the mean particle diameter of the RBC. However, JP757 teaches that the incorporation of the RBC can affect the wear resistance. ([0004]) Note that the wear resistance of a material primarily depends on the surface characteristics thereof. In turn, the amount and the mean particle diameter of the RBC can dramatically affect the surface

characteristics. In other words, the amount and the mean particle diameter are Result-Effective variables. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to utilize a RBC in whatever amount and having whatever mean particle diameter through routine experimentation in order to obtain a solid lubricant having a desired wear resistance. Especially, Applicants do not show the criticalities of the amount and the mean particle diameter of the RBC. See MPEP 2144.05 (II).

8. Claims 2-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP389.

JP389 discloses a solid lubricant, supra, which is incorporated herein by reference. JP389 is silent on the amount of the RBC used and the mean particle diameter of the RBC. However, JP389 teaches that the incorporation of the RBC can affect the friction coefficient of the material formed. (Figure 3) Note that the friction coefficient of a material primarily depends on the surface characteristics thereof. In turn, the amount and the mean particle diameter of the RBC can dramatically affect the surface characteristics. In other words, the amount and the mean particle diameter are Result-Effective variables. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was

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made to utilize a RBC in whatever amount and having whatever mean particle diameter through routine experimentation in order to obtain a solid lubricant having a desired friction coefficient. Especially, Applicants do not show the criticalities of the amount and the mean particle diameter of the RBC. See MPEP 2144.05 (II).

9. When the RBC is used in an amount of greater than 50 wt% and up to 74 wt%, the following rejection applies.

10. Claims 3 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shinozaki (JP 2002-030222).

Shinozaki discloses a sliding member having a sliding surface covered with a solid lubricant, *supra*, which is incorporated herein by reference. Shinozaki is silent on the use of RBC in an amount of greater than 50 wt% and up to 74 wt%. However, Shinozaki further teaches in Figure 4 that the more RBC is used, the less the friction coefficient. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to utilize the RBC in an amount of greater than 50 wt% through routine experimentation in order to obtain a sliding member with a even lower friction coefficient. Especially, Applicants do

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not show the criticality of the RBC amount of greater than 50 wt% and up to 74 wt%. See MPEP 2144.05 (II).

11. Claims 4 and 8 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

None of the above references teaches or fairly suggests the use of an acrylsilicone resin.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kuo-Liang Peng whose telephone number is (571) 272-1091. The examiner can normally be reached on Monday-Friday from 8:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski, can be reached on (571) 272-1302. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for

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published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR


only. For more information about the PAIR system, see [http://pair-](http://pair-direct.uspto.gov)

[direct.uspto.gov](http://pair-direct.uspto.gov). Should you have questions on access to the Private PAIR system,

contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

klp

May 10, 2005


Kuo-Liang Peng
Primary Examiner
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